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09/558,656	04/26/2000	Miyuki Enokida	862.C1901	9979

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EXAMINER
TO, BAOQUOC N

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/558,656	ENOKIDA ET AL.	
	Examiner	Art Unit	
	Baoquoc N To	2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-64 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-64 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. Claims 1-64 are presented for examination.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 10/07/02. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Arguments

3. Applicant's arguments filed 04/11/03 have been fully considered but they are not persuasive.

The applicant argues that, "none of the reference are seen to disclose or suggest append meta-data corresponding to a file belonging to the directory to the end of the directory data, and then outputting as a single directory data file the entirely of the appended meta-data and directory data."

The examiner disagrees with the applicant argument because Van Maren teaches the method of writing in the reverse order from how they appear in the sequential data stream (col. 5, lines 48-49). In addition, Van Maren also discloses the data and meta-data driven to the disk surface such that the ICBs appear first, the directory appear next and the data appear last (col. 5, lines 44-47). This clearly indicates the concept of appending to the directory to the ICBs as the applicant claimed appending to the end of directory. Moreover, in Van Maren invention begins by

counting the total number of directory files and data files in the file set (col. 7, lines 18-19). Since Van Maren suggested for the appending the metadata to the directory, Dahod teaching clearly discloses append to the search directory. Therefore, it would have been obvious to modify the teaching of Dahod into Van Maren to allow the data to be transferred at one single file.

Applicant also argues that, "to distinguish the meta-data included in the data from the directory data file by determining whether or not there is data written in a proper format for a predetermined data writing language, so as to treat the meta-data as meta data appended to a file belonging to the directory."

The examiner respectfully disagrees with the above argument because Van Maren clearly indicates that the distinction of the data being written to the disk in the order of ICBs, the directory, and data appear of the file (col. 5, lines 43-50). Since Maren teaches the distinguishing of metadata and other data. In addition, Takahashi discloses the marks for indicating the start and end position of individual element are referred to as "start tags" and "end tags". This distinguishes the metadata in the file system. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching Takahashi into Van Maren to allow the system to recognize the data that written correctly in the required language.

Claims 13, 21, 31, 43, 51, 61, 63 and 64 are rejected under the same reason as claims 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 31-34 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Maren et al. (US. Patent No. 5,579,516) in view of Dahod et al. (US. Patent No. 5,530,856).

Regarding on claims 1, 31, and 61, Van Maren teaches data processing method comprising the steps of:

(a) reading directory data corresponding to a directory in a file management system which manages files using a directory structure [col. 4, lines 21-29];

(b) reading meta-data to be attached to the directory data, the meta-data corresponding to a file belonging to the directory [col. 5, lines 35-37];

(d) outputting as a single directory data file the entirety of the data obtained in said step (c) [col. 6, lines 4-12].

However, Van Maren does not explicitly teach (c) appending the meta-data read in said step (b) to the end of the directory data read in said step (a). However, Dahod teaches, "append to search directory" [col. 3, lines 62-63]. This teaches the data (meta-data) is appended to the search directory. Therefore, it would have been obvious to

one ordinary skill in the art to modify the teaching of Dahod into Van Maren in order to provide the written to the media in recursive descent order to minimize the amount of temporary storage required to build and write meta-data.

Regarding on claims 2 and 32, Van Maren teaches step of:(e) determining whether or not the meta-data read in said step (b) is written in a proper format for a predetermined data writing language [col. 5, lines 21-23];

wherein, in said step (c), the meta-data is appended to the end of the directory data if it is determined in said step (e) that the meta-data is written in the proper format [col. 5, lines 43-50].

Regarding on claims 3-4 and 33-34,Van Maren teaches the step (e), it is determined whether or not the meta-data is valid as the predetermined data writing language [col. 5, lines 21-23].

3. Claims 5-12, 35-42 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Maren et al. (US. Patent No. 5,579,516) in view of Takahashi et al. (US. Patent No. 6,105,022).

Regarding on claims 5, 35 and 62, Van Maren teaches a method of determining whether meta-data is registered in data of a directory data file, comprising the steps of:

(a) reading a directory data file [col. 5, lines 21-31]; and

(b) inspecting data of the directory data file read in said step (a), from the end toward the beginning thereof [col. 5, lines 43-50]. Van Maren does not explicitly teach distinguishing the meta-data included in the data by determining whether or not there is data written in a proper format for a predetermined data writing language so as to treat the meta-data as meta-data appended to a file belonging to the directory. However, Takahashi teaches, "marks for indicating the start and end position of each individual element of a text written in SGML, the structure of the text can be revealed clearly. The mark for indicating the start and end position on an individual element are referred to as "start tags" and "end tags", respectively. A start tag preceding an element is the element-type name of the element put between the special characters "<and>" [col. 12, lines 63-67 and col. 13, lines 1-3]. This teaches by inspecting the star tags and the end tags the meta-data is distinguish from the other data. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Takahashi into Van Maren in order to distinguish the meta data from the other data that in the same directory.

Regarding on claims 6 and 36, Van Maren teaches the subject matter except for the step of: (c) when meta-data is distinguished in said step (b), extracting and outputting the distinguished meta-data. However, Takahashi teaches, "character string index is first search for partial character string matching the specified string of character, and a set of pieces of structured-character position information corresponding to the partial character string are found" [col. 39, lines 36-40]. This teaches the searching to

extract data. Furthermore, Takahashi teaches, "a set of bit position composed of the extracted group of pieces of structured-character-position information created" [col. 39, lines 55-57]. This teaches the distinguished meta-data is outputting after extracting. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Takahashi into Van Maren in order to extracting and creating the structure-character position.

Regarding on claims 7 and 37, Van Maren teaches step (c), display is performed based on the extracted meta-data [col. 8, lines 33-34].

Regarding on claims 8 and 38, Van Maren teaches step (e), the extracted meta-data is provided to a tool which performs predetermined processing based on the predetermined data writing language [col. 39, lines 22-58].

Regarding on claims 9 and 39, Takahashi teaches step (b) further comprises the steps of:

(c) checking whether or not a final character string stipulated in the predetermined data writing language is present at the end of the data [col. 12, lines 63-66]; and

(d) when the final character string is present, searching for an initial character string stipulated in the predetermined data writing language, from the end toward the beginning of the data [col. 13, lines 3-6];

wherein, when there is data between the final character string and the initial character string, this data is distinguished as meta-data [col. 13, lines 1-3].

Regarding on claims 10 and 40, Takahashi teaches step (b) further comprises the step of:

(e) investigating whether or not the data bracketed by the final character string [col. 13, lines 3-6] and the initial character string has a proper format for the predetermined data writing language [col. 12, lines 63-66].

Regarding on claims 11 and 41, Takahashi teaches the investigation in said step (e) also includes determination of whether the data bracketed by the final character string [col. 13, lines 3-6] and the initial character string is valid as the predetermined data writing language [col. 12, lines 63-66].

Regarding on claims 12 and 42, Takahashi teaches the investigation in said step (e) also includes determination of whether the data bracketed by the final character string and the initial character string is well-formed as the predetermined data writing language [col. 12, lines 66-67 and col. 13, lines 1-3].

5. Claims 13-14, 17-29, 43-44 and 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (US. Patent No. 5,987,506).

Regarding on claims 13, 43 and 63, Carter teaches a data processing method comprising the steps of:

(a) reading directory data corresponding to a directory to which belongs data file [col. 36, lines 45-49];

(b) extracting meta-data from the directory data read in said step [col. 36, lines 49-52](a); and

(c) based on the meta-data extracted in said step (b), attaching meta-data to the data file [col. 36, lines 45-49].

Although, Carter does not explicitly teach the meta-data is the data extract from the directory. However, Carter teaches, "the address of the file's inode- this could be extracted from the directory in which the file resides" [col. 36, lines 49-51]. This teaches the file's inode is the meta-data. Therefore, would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the file's inode in order to provide the a global addressable storage system that employs data migration and replication across interconnected network boundaries and among remote access computers

Regarding on claims 14 and 44, Carter does not explicitly teach step (c) further comprises the step of: (d) determining whether meta-data is registered in the data for processing; wherein, when it is determined that no meta-data is registered in the data for processing, the meta-data extracted in said step (b) is attached to the data for processing [col. 36, lines 45-59].

Regarding on claims 17 and 47, Carter teaches the data for processing is data copied to another directory [col. 36, lines 47-49].

Regarding on claims 18 and 48, Carter teaches the data for processing is data moved to another directory [col. 36, lines 47-49].

Regarding on claims 19 and 49, Carter teaches the data for processing includes a binary data portion (file's inode) [col. 36, line 49]; and
in said step (c), the meta-data is appended after the binary data portion [col. 36, lines 48-49].

Regarding on claims 20 and 50, Van Maren teaches the data for processing is image data (data files) [col. 6, lines 54-55], audio data, or dynamic image data.

6. Claims 15-16 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (US. Patent No. 5,987,506) in view of Wetherbee (US. Patent No. 5,937,409).

Regarding on claims 15 and 45, Carter teaches step c) further comprises the steps of:

(d) determining whether meta-data is registered in the data for processing [col. 36, lines 45-49];

(e) when it is determined that meta-data is registered in the data for processing, the meta-data is separated from the data for processing [col. 6, lines 45-49]; and

(f) generating new meta-data based on the meta-data separated in said step (e) and the meta-data extracted in said step (b);

wherein the meta-data generated in said step (f) is attached to the data for processing remaining after separation of the meta-data in said step (e).

Carter does not explicitly teach generating the new meta-data. However, Wetherbee teaches, "the meta-data may be generated from multiple resources" [col. 4, lines 54-55]. This teaches the new meta-data is generated. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Wetherbee into Carter in order to allow the a plurality of networked computer to access data by addressing even when the data is stored on a persistent storage device such as a computer hard disk and other traditionally non-addressable storage devices.

Regarding on claims 16 and 46, Werthebee teaches step (f), new meta-data is generated so as to include all data items included in the meta-data obtained in said step (e) and the meta-data obtained in said step (b) [col. 4, lines 50-55].

7. Claims 21-27, 51-57 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (US. Patent No. 5,987,506) in view of Chidlovskii et al. (US. Patent No. 6,327,590).

Regarding on claims 21, 51 and 64, Carter teaches data processing method comprising the steps of:

(a) reading data files belonging to an indicated directory [col. 36, lines 45-49];

(b) extracting meta-data from the data files read in said step [col. 36, lines 49-52](a);

(c) generating meta-data for the directory based on the meta-data extracted in said step (b) [col. 36, lines 49-52]; and

(d) attaching the meta-data generated in said step (c) to directory data as meta-data corresponding to a file belonging to the directory [col. 36, lines 45-49].

Carter does not explicitly teach generating meta-data. However, Chidlovskii teaches, "the wrapper suitable for extracting the information be used. A wrapper suitable is a tool used by the meta-searcher that scans the HTML files returned by the search engine, drops the markup instructions and exacts the information related to the query. Then, the wrapper takes the answers from the different providers, puts them in the new format and generates an HTML files that can be viewed by the user. The API or the wrapper generates "meta-data" which is used by the profilers to construct and to incrementally update the user" [col. 5, lines 15-24]. This teaches by utilizing query to search for HTML and generate the meta-data. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Chidlovskii into Carter in order to generates the search result comprising at least one item obtained form the information retrieval system.

Regarding on claims 22 and 52, Chidlovskii teaches step (c), the meta-data for the directory is generated based on a meta-data item included in all of the meta-data extracted in said step (b) [col. 5, lines 22-26].

Regarding in claims 23 and 53, Chidlovskii teaches step (c), the meta-data for the directory is generated based on a meta-data item shared by the most meta-data extracted in said step (b) [col. 5, lines 22-26].

Regarding in claims 24 and 54, Carter teaches the step of: (e) generating a new directory, and recording therein data files to which are attached meta-data which includes meta-data items used in the meta-data for the directory generated in said step (c) [col. 25, lines 57-60];

wherein, in said step (d), the meta-data generated in said step (c) is attached to directory data corresponding to the new directory [col. 36, lines 47-49].

Regarding on claims 25 and 55, teaches the step of: (e) generating a new directory [col. 25, lines 57-60], and recording therein data files to which are attached meta-data which does not include meta-data items used in the meta-data for the directory generated in said step (c) [col. 36, lines 49-52].

Regarding on claims 26 and 56, Chidlovskii teaches the data file is an image data file, an audio data file, or a dynamic image data file [col. 1, lines 19-21]

Regarding on claims 27 and 57, teaches step (d), Carter teaches the meta-data generated in said step (c) is appended to the end of the directory data [col. 36, lines 49-52].

8. Claims 28-30 and 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Maren et al. (US. Patent No. 5,579,516) in view of Dahod et al. (US. Patent No. 5,530,856) and further in view of Takahashi et al. (US. Patent No. 6,105,022).

Regarding on claims 28-30 and 58-60, Both Van Maren and Dahod do not explicitly teach the meta-data is written in the data writing language XML. However, Takahashi teaches, "adding marks for indicating the start and end position of each individual element of a text written in SGML, the structure of the text van be revealed clearly. The mark for indicating the start and end position on an individual element are referred to as "start tags" and "end tags", respectively. A start tag preceding an element is the element-type name of the element put between the special characters "<and>" [col. 12, lines 63-67-col. 13, lines 1-3]. This teaches the predetermined language is SGML. It is also known in the art XML, HTML, and SGML are the language use to develop web page. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Takahashi into Dahod and Van Maren in order to provide a function for carrying out a search operation specifying a detailed and efficient structure.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is (703) 305-1949 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached at (703) 305-4393.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

- (703) 746-7238 [After Final Communication}]
- (703) 746-7239 [Official Communication]
- (703) 746-7240 [Non-Official Communication]

Hand-delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA 22202
Fourth Floor (Receptionist).

JEAN M. CORRIELUS
PRIMARY EXAMINER

Baoquoc N. To
June 27, 2003